

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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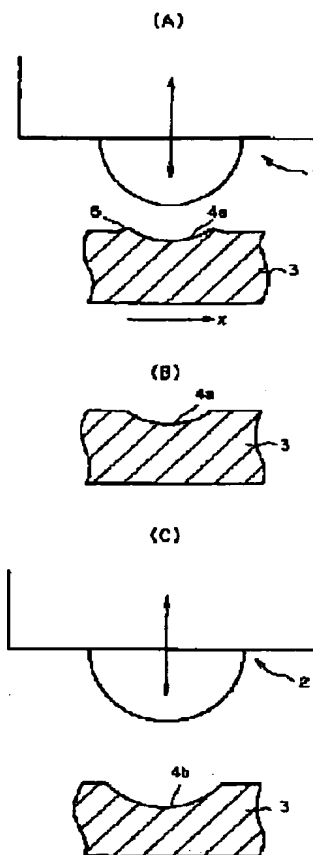
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TITLE : PRODUCTION OF MOLD FOR  
MOLDING MICRO-LENS ARRAY



ABSTRACT : PROBLEM TO BE SOLVED: To produce a mold for molding which can stably mold a high precision micro-lens array.

SOLUTION: A mold substrate 3 for forming a mold for molding is prepared, and first, the substrate 3 is subjected to force processing by using the first punch 1 having a ruby ball with a radius of curvature of, for example, 100  $\mu\text{m}$  to form a spherical recessed part 4a. The recessed part 4a is formed in the shape of an array by applying the process in the X direction of the substrate 3 in the same pitch. A substrate upheaval part 5 formed by the force processing by the first punch 1 is removed by CMP(chemical polishing). With the use of the second punch 2 having a ruby ball with a radius of curvature of, for example, 125  $\mu\text{m}$ , the force processing is applied on the spherical recessed part 4a to prepare a lens mold 4b to obtain the mold for molding a micro-lens array.

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